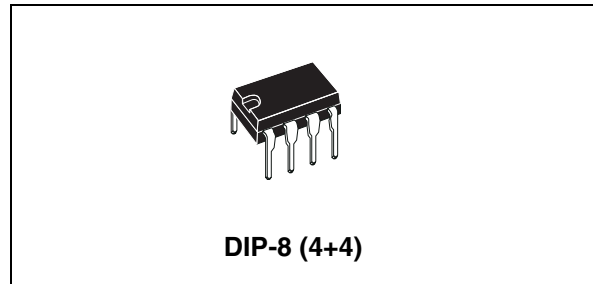


Features

- 2 W output power into 8 Ω at 12 V, THD = 10%
- Internally fixed gain of 32 dB
- No feedback capacitor
- No boucherot cell
- Thermal protection
- AC short-circuit protection
- SVR capacitor for better ripple rejection
- Low turn-on/off “pop” noise
- Standby mode

**Description**

The TDA7267T is a new technology mono audio amplifier in a DIP-8 package specifically designed for TV applications.

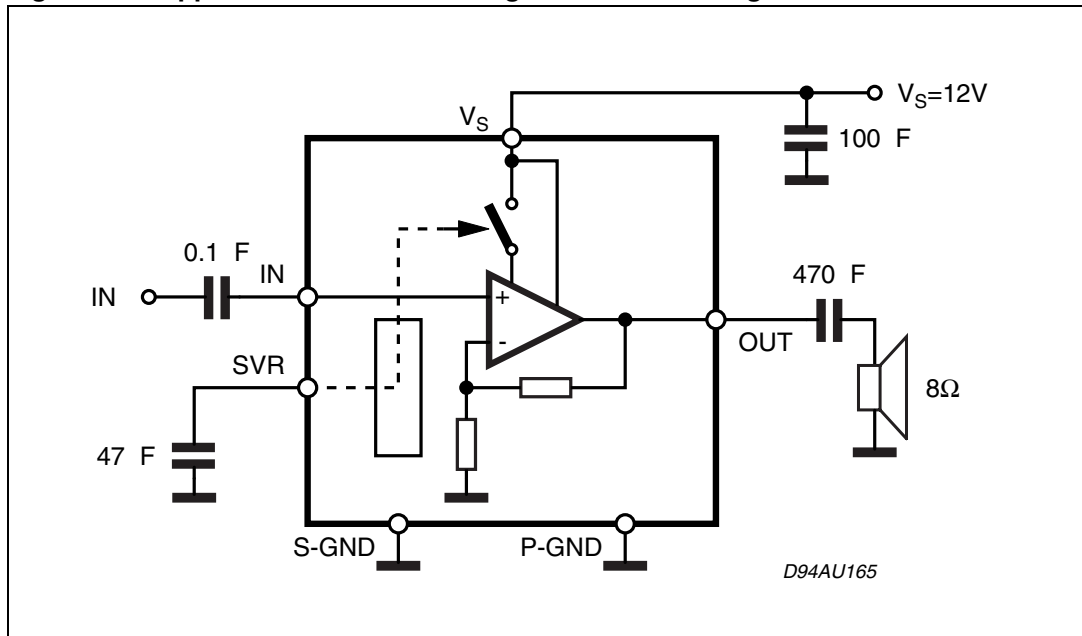
Thanks to the fully complementary output configuration the device delivers a rail-to-rail voltage swing without the need for bootstrap capacitors.

Table 1. Device summary

Order code	Operating Temp. range	Package	Packaging
TDA7267T	0° to 70° C	DIP-8 (4+4)	Tube

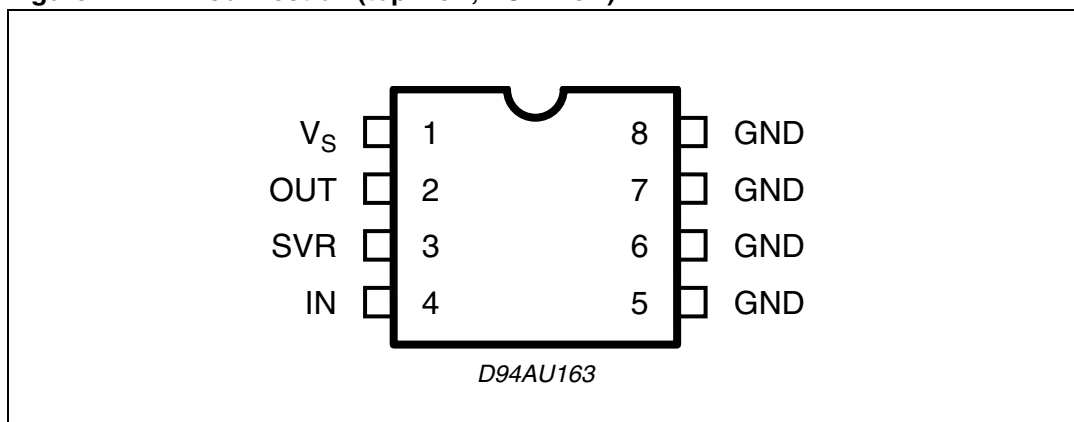
1 Block diagram and applications circuit

Figure 1. Applications circuit showing internal block diagram



2 Pin description

Figure 2. Pin connection (top view, PCB view)



3 Electrical specifications

3.1 Absolute maximum ratings

Table 2. Absolute maximum ratings

Symbol	Parameter	Value	Unit
V_S	DC supply voltage	18	V
I_O	Peak output current	1.5	A
T_{op}	Operating temperature range	0 to 70	°C
T_j	Junction temperature	150	°C
T_{stg}	Storage temperature range	-40 to 150	°C

3.2 Thermal data

Table 3. Thermal data

Symbol	Parameter	Min	Typ	Max	Unit
$R_{th\ j-amb}$	Thermal resistance, junction to ambient (on PCB)	-	76	-	°C/W
$R_{th\ j-case}$	Thermal resistance, junction to case pin (6 or 7)	-	23	-	°C/W

3.3 Electrical specifications

Unless otherwise stated, the results in [Table 4](#) below are given for the conditions: $V_S = 12\text{ V}$, $R_L = 8\ \Omega$, $f = 1\text{ kHz}$ and $T_{amb} = 25^\circ\text{ C}$.

Table 4. Electrical specifications

Symbol	Parameter	Condition	Min	Typ	Max	Unit
V_S	Supply voltage range	-	4.5	-	18	V
I_q	Total quiescent current	-	-	20	30	mA
I_{STBY}	Current in standby	Pin 3 shorted to GND	-	-	0.3	mA
V_O	Quiescent output voltage	-	-	6	-	V
A_V	Voltage gain	-	-	32	-	dB
R_{IN}	Input resistance	-	-	100	-	k Ω
P_O	Output power	THD = 10%	1.8	2.0	-	W
THD	Total harmonic distortion	$P_O = 1\text{ W}$	-	-	1.0	%
SVR	Supply voltage rejection	$f_{ripple} = 1\text{ kHz}$, $V_{ripple} = 150\text{ mV RMS}$	-	50	-	dB

Table 4. Electrical specifications (continued)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
E_I	Input noise voltage	$R_G = 10\text{ k}\Omega$, BW = 20 Hz to 20 kHz	-	1.5	5.0	μV
V_{STBY}	Standby enable voltage	-	-	-	1.0	V

4 Applications information

For 12-V supply and 8-Ω speaker applications the maximum power dissipation is approximately 1.2 W.

Assuming that the maximum ambient temperature is 70° C the required thermal resistance of the devices must be equal to $(150 - 70) / 1.2 = 67 \text{ }^\circ\text{C/W}$.

The junction-to-pin thermal resistance of the package is about 23 °C/W. This means that an external heatsink of around 43 °C/W is required.

The copper ground plane of the PCB can be used for dissipating this heat.

Standby switches must be able to discharge the C_{SVR} current.

Figure 3. Thermal resistance junction-to-ambient vs copper area on PCB

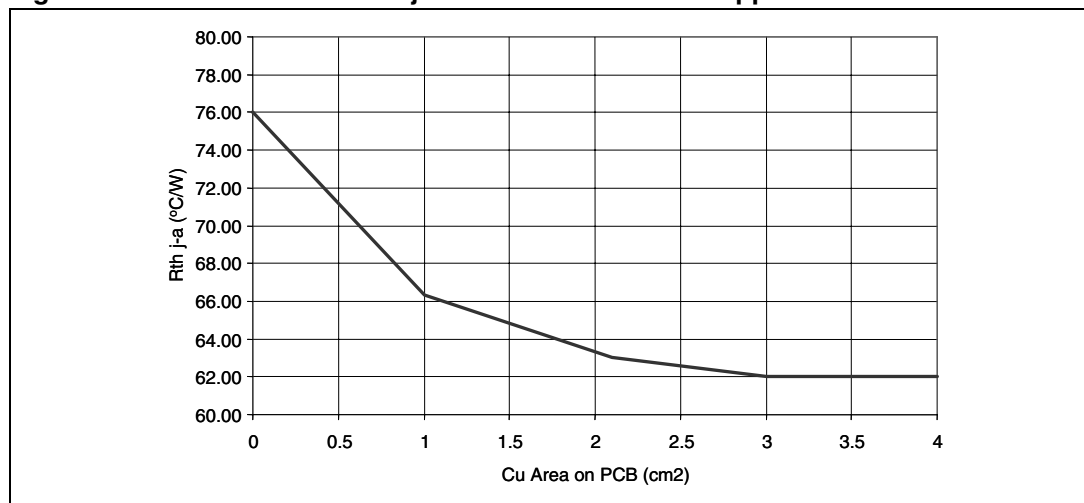


Figure 4. Power derating curve

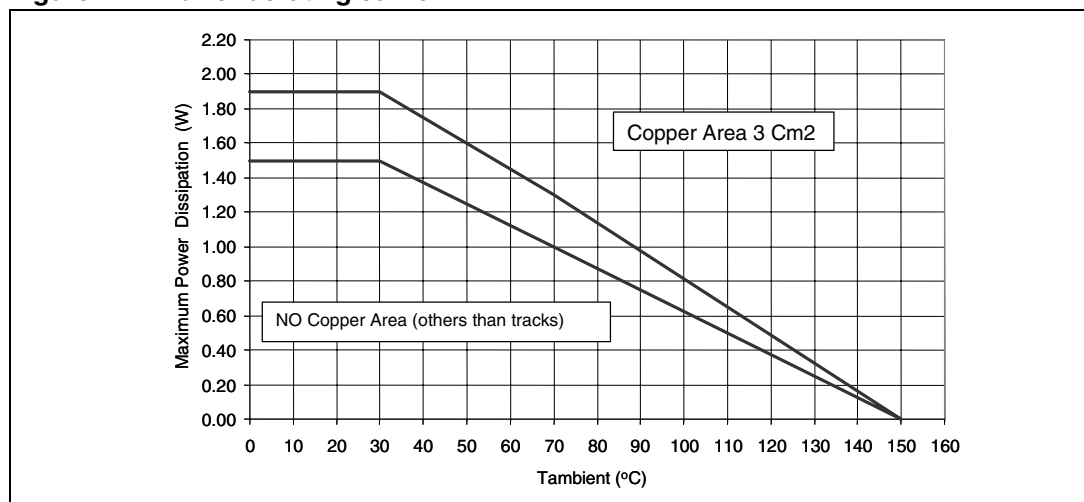
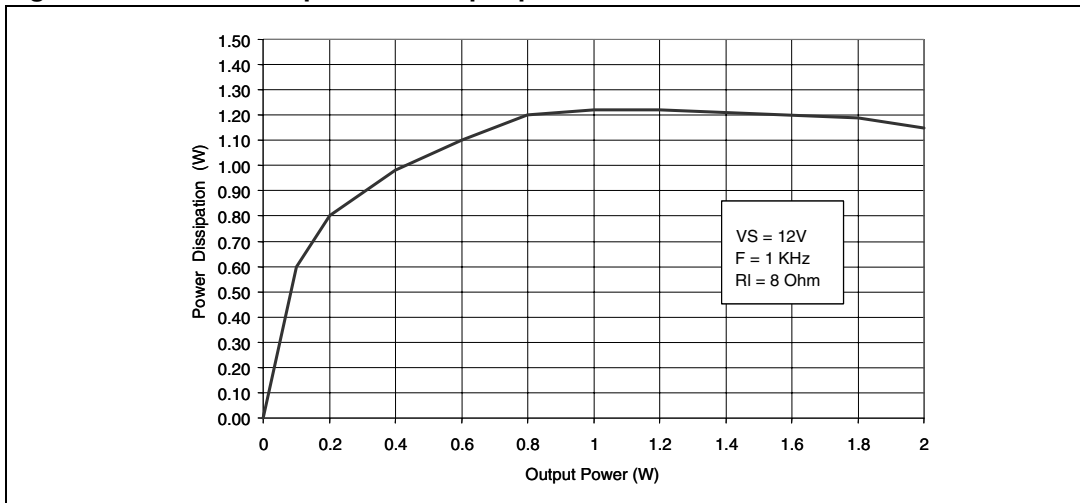


Figure 5. Power dissipation vs output power

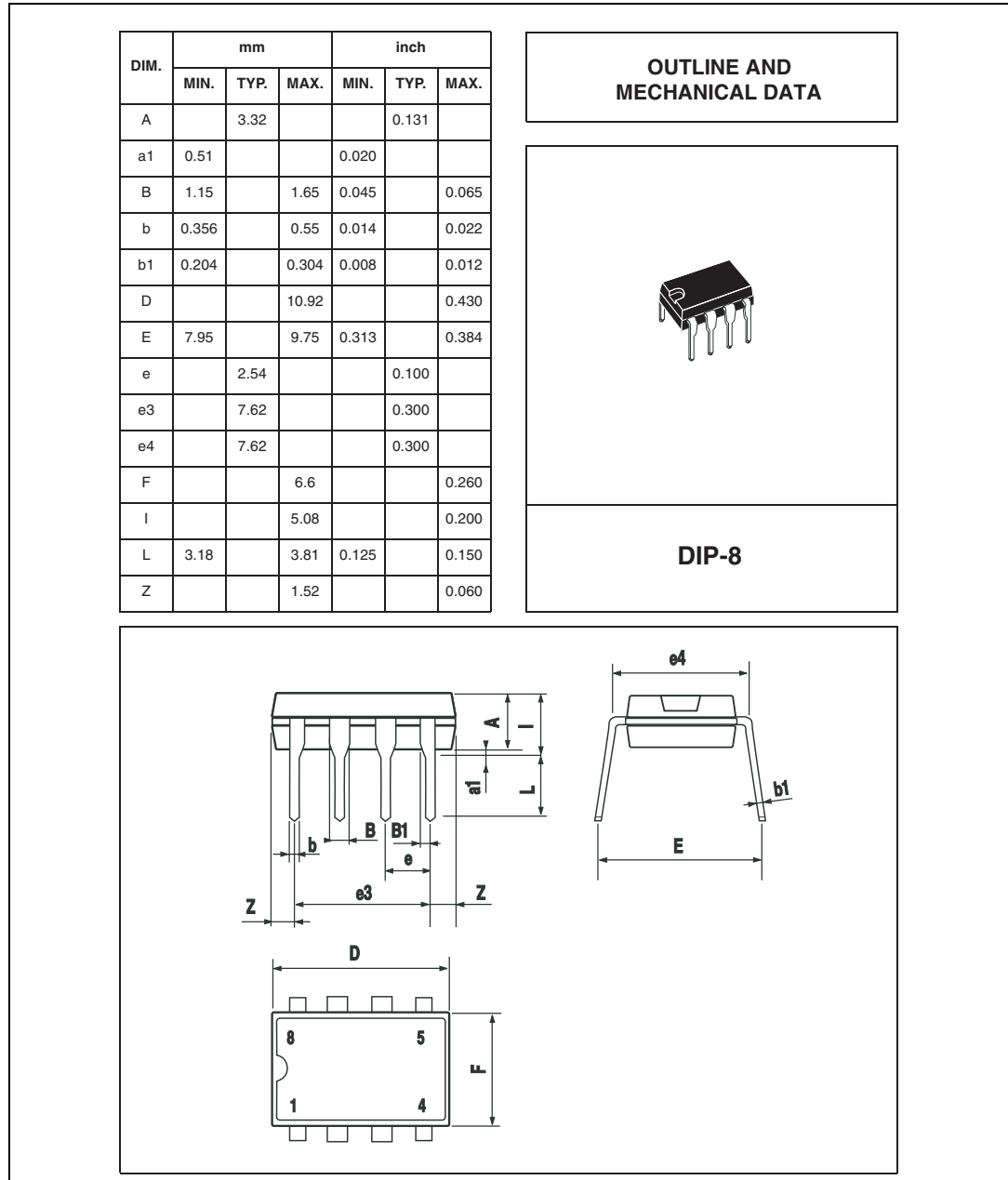


5 Package mechanical data

The TDA7267T comes in a 8-pin DIP package.

Figure 6 below gives the package outline and dimensions.

Figure 6. DIP-8 outline drawing and dimensions



In order to meet environmental requirements, ST offers these devices in different grades of ECOPACK[®] packages, depending on their level of environmental compliance. ECOPACK[®] specifications, grade definitions and product status are available at: www.st.com. ECOPACK[®] is an ST trademark.

6 Revision history

Table 5. Document revision history

Date	Revision	Changes
Dec-2005	1	Initial release.
29-May-2009	2	Updated temperature to 70° C in Chapter 4 on page 6 .

Please Read Carefully:

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST's terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

UNLESS OTHERWISE SET FORTH IN ST'S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS EXPRESSLY APPROVED IN WRITING BY AN AUTHORIZED ST REPRESENTATIVE, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER'S OWN RISK.

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners.

© 2009 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Philippines - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com